We claim:

1. ~~A method of format detection for information received over a communication~~ system, the method comprising the step of:

determining the format of the received information by decoding received information extracted from a defined guiding channel whereby information size values obtained from a defined list of size values for the guiding channel is used in the decoding.

2. The method of claim 1 where the step of determining the format comprises the steps of:

providing a lookup table to store the information size values of the guiding channel and corresponding information size values of other channels of the communication system;

extracting received information from the other communication channels;

performing decoding operations on the extracted guiding channel information M times where M is an integer that represents a total number of information size values stored in the list;

deciding which of the M decoding operations resulted in a correct decode; and

determining the format of the received information from the information size value of the guiding channel that yielded the correct decode.

3. The method of claim 2 where the step of deciding which of the M decoding operations resulted in a correct decode comprises the steps of:

performing at least one decode operation on the extracted guiding channel information yielding at least one decode result; and

applying the at least one decode result to an algorithm for deciding whether there is a correct decode and which information size value yielded such correct decode.

4. The method of claim 3 where the communication system is a 3GPP compliant UMTS where the guiding channel is TrCh1 and the decoding operations comprise

convolutional decoding yielding a result on which a tail bit test and CRC decoding are performed whereby each such operation is performed M times.

5. The method of claim 4 where the format being determined are transport formats of TrCh2 and TrCh3 based on a format detected for TrCh1.

6. The method of claim 4 where the decoding operations yield decoding results that are used in the algorithm to decide the correct decode where the CRC decoding for the i^{th} operation yields a value C_i, and the tail bit test yields values T_i and K_i where i is any integer equal to M or less and whereby

(a) $C_i = 1$ indicates a CRC pass;

(b) $C_i = 0$ indicates a CRC fail;

(c) T_i is an integer value that represent a total number of "1" bits occurring in the tail bits of the convolutional decoding result and further, T_0 is a defined threshold value that is an integer equal to 1 or greater.

(d) $K_i = 1$ indicates a tail bit test pass condition where $T_i \leq T_0$; and

(e) $K_i = 0$ indicates a tail bit test fail;

7. The method of claim 6 where a correct decode is declared when any one of the following conditions occurs from one of the M decoding operations:

(a) only one of the decoding operations yielded in a CRC pass;

(b) none of the decoding operations yielded a CRC pass, and of these, only one passed the tail bit test;

(c) none of the decoding operations yielded a CRC pass, but more than one passed the tail bit test, and of these, only one satisfies the condition $T_i = T_0$;

(d) none of the decoding operations yielded a CRC pass, but more than one passed the tail bit test, and of these, only one satisfies the condition $T_i < T_0$;

(e) More than one decoding operation yielded a CRC pass, but none passed the tail bit test, and of these, only one satisfies the condition $T_i = T_0 + 1$;

(f) More than one decoding operation yielded a CRC pass and passed the tail bit test, but only one of these satisfy the condition $T_i < T_0$;

(g) More than one decoding operation yielded a CRC pass, and of these, only one passed the tail bit test; and

(h) More than one decoding operation yielded a CRC pass and passed the tail bit test, but only one satisfies the condition $T_i = T_0$.

8. The method of claim 6 where a BTFD failure is declared when any one of the following sets of values or conditions occur from at least one of the M decoding operations:

(a) none of the M decoding operations yielded either a CRC pass or a tail bit test pass result;

(b) none of the M decoding operations yielded a CRC pass, but more than one passed the tail bit test and none of these satisfy the condition $T_i = T_0$ condition;

(c) none of the M decoding operations yielded a CRC pass but more than one passed the tail bit test, and of these, more than one decoding operation yielded the values $C_i = 0$; $K_i = 1$; $T_i = T_0$;

(d) none of the M decoding operations yielded a CRC pass, but more than one passed the tail bit test, and of these, more than one yielded values of $C_i = 0$; $K_i = 1$; $T_i < T_0$;

(e) more than one of the M decoding operations yielded a CRC pass, but none passed the tail bit test, and of these, none satisfy the condition $T_i = T_0 + 1$;

(f) more than one of the M decoding operations yielded a CRC pass, but none passed the tail bit test, and of these, more than one yielded the values $C_i = 1$; $K_i = 1$; $T_i = T_0 + 1$;

(g) more than one of the M decoding operations yielded values of $C_i = 1$; $K_i = 1$; $T_i < T_0$;

(h) more than one of the decoding operations yielded a CRC pass and a tail bit pass result, and of these, none satisfy the conditions $T_i < T_0$ or $T_i = T_0$; and

(i) more than one of the decoding operations yielded a CRC pass and a tail bit test pass result, and of these, more than one yielded values of $C_i = 1$; $K_i = 1$; $T_i = T_0$.